



VSP-MIKRON



FRED

$V_{RRM} = 400V$

$I_F = 100A$

**KD10040 UF**

Preliminary Specification, , 2012

Die Size:

5,6 x 5,6 mm

**Ultra low losses**

Passivation: Silicon Oxide

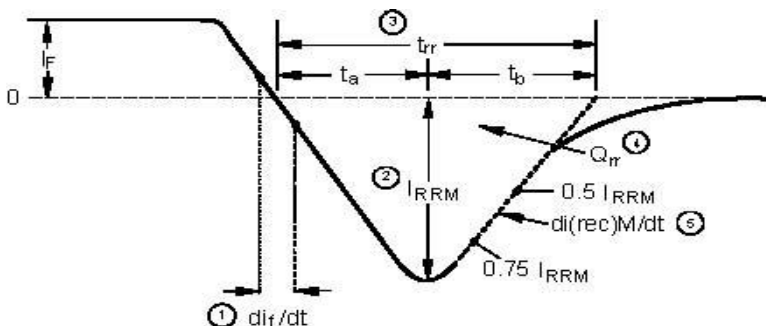
Maximum rated values:

Parameter	Symbol	min	max	Unit
Repetitive peak reverse voltage	$V_{RRM}$	-	400	V
Continuous forward current	$I_F$	-	100	A
Repetitive peak forward current*	$I_{FRM}$	-	200	A
Junction temperature	$T_{vj}$	-	150	°C

\* - Limited by  $T_{vj\ max}$

Diode Characteristics values:

Parameter	Symbol	Conditions	min	typ	max	Unit
Continuous forward voltage	$V_F$	$I_F=10A, T_{vj}= 25^\circ C$		0.9	1.1	V
Continuous forward voltage	$V_F$	$I_F=100A, T_{vj}= 25^\circ C$		1.1	1.3	V
Continuous reverse current	$I_R$	$V_R=400V \begin{matrix} T_{vj}= 25^\circ C \\ T_{vj}= 125^\circ C \end{matrix}$		1.0	50	uA mA
Reverse Recovery Time	$t_{rr}$	$I_F=1A, V_R=30V, \text{d}I_F/\text{d}t=100A/\mu S.$		60	70	nS



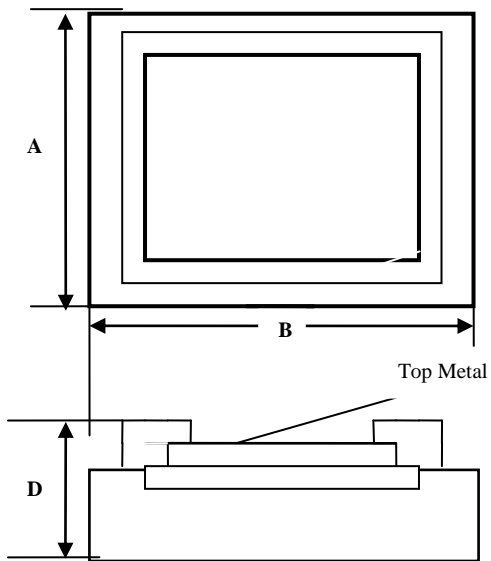
- $di_r/dt$  - Rate of change of current through zero crossing
- $I_{RRM}$  - Peak reverse recovery current
- $t_{rr}$  - Reverse recovery time measured from zero crossing point of negative going  $I_F$  to point where a line passing through  $0.75 I_{RRM}$  and  $0.50 I_{RRM}$  extrapolated to zero current
- $Q_{rr}$  - Area under curve defined by  $t_{rr}$  and  $I_{RRM}$   

$$Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$$
- $di_{(rec)M}/dt$  - Peak rate of change of current during  $t_b$  portion of  $t_{rr}$

Mechanical properties:

*Top metal: Al-Ti - Ag*

*Backside metal: Ti-Ni-Ag – for Soldering*



DIM	ITEM	µm
A	Die Size	5600
B		5600
D	Thickness	350max.
Scribe line Width		60

[www.vsp-mikron.com](http://www.vsp-mikron.com)

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*Backside metal: Ti-Ni-Ag – for Soldering.*